Facility Well Name CHS Refinery #3 **UIC Permit #** KS-01-113-010 **Month** December **Year** 2022

Submitted 01/18/2023 **Approved** 01/30/2023 **KOLAR Document ID** 1681068

Class I-V Injection Well Monthly Monitoring

Summary of Monthly Report

Number of days injection occurred: 31

Barrels per Day Maximum: 51,429

			Annulus Pressure psig min 60		Injection Pressure		
	Injection Volume Barrels per Day	Injection Rate Barrels per Minute	Gauge psig	Cont. Record psig	Gauge psig	Cont. Record psig	Amount Added to Seal Pot
Monthly Average	8,430	5.85	103	104	3.9	3.9	
Monthly Maximum	10,058	6.98	120	118	15.0	14.3	
Monthly Minimum	7,886	5.48	94	94	2.0	2.5	
Monthly Total	261,340						

Summary of Continuous Recorder Data

Maximum Annulus Pressure psig	Minimum Annulus Pressure psig	Maximum Injection Pressure psig	Minimum Injection Pressure psig
127.09	91.59	15.12	2.06

Comments:

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Daily Recorder Data

Day	Time 24 hr	Injection Volume Barrels Per Day	Injection Rate Barrels Per Minute	Annulus Pressure (Gauge) psig	Annulus Pressure (Continuous Recorder) psig	Injection Pressure (Gauge) + / -	Injection Pressure (Continuous Recorder) + / -	Seal Pot Fluid Level inches	Type of Fluid Added to Seal Pot	Amount of Fluid Added to Seal Pot gallons	Initials of Collector of Field Recordings		
1	07:00	8,188.81	5.69	97	98.2	2	2.7	5			MW		
2	07:00	8,093.83	5.62	104	103.5	2	2.7	5			BD		
3	07:00	8,007.43	5.57	98	98.1	2	2.7	5			BD		
4	07:00	8,067.43	5.60	98	99.5	2	2.7	6			BD		
5	07:00	8,005.38	5.55	101	103.5	2	2.7	6			CG		
6	07:00	7,984.12	5.55	102	101.5	2	2.7	6			MH		
7	07:00	8,039.67	5.57	104	107.2	2	2.8	7			BD		
8	07:00	8,021.83	5.57	106	107.6	2	2.8	7			BD		
9	07:00	7,964.90	5.52	105	104.4	2	2.7	7			MH		
10	07:00	7,929.26	5.50	108	107.8	2	2.8	7			MH		
11	07:00	7,886.40	5.48	104	104.0	2	2.8	7			MH		
12	07:00	7,893.26	5.48	104	107.1	3	2.8	7			TY		
13	07:00	8,423.67	5.86	110	107.4	3	2.9	8			JC		
14	07:00	8,210.05	5.69	95	95.9	2	2.7	6			MH		
15	07:00	7,990.29	5.55	95	93.8	2	2.8	6			MH		
16	07:00	8,001.95	5.55	95	93.8	4	3.3	5			JC		
17	07:00	8,551.55	5.93	96	98.0	15	14.3	6			TY		
18	07:00	10,057.71	6.98	100	100.9	15	13.3	7			JC		
19	07:00	10,004.57	6.95	100	103.4	14	13.3	7			NB		
20	07:00	9,579.10	6.64	96	95.1	2	2.5	7			NB		
21	07:00	9,135.10	6.33	99	100.2	5	4.2	6			TY		
22	07:00	9,055.55	6.29	94	95.1	2	2.5	5			TY		
23	07:00	8,769.95	6.10	96	97.6	4	3.3	4			NB		
24	07:00	8,658.17	6.02	105	108.0	4	3.2	5			MW		
25	07:00	8,579.67	5.95	110	114.6	3	2.7	5			NB		
26	07:00	8,544.69	5.93	116	116.7	3	2.7	7			BD		
27	07:00	8,431.55	5.86	106	108.7	3	2.7	6			BD		
28	07:00	8,395.19	5.83	115	116.0	3	2.7	6			NB		
29	07:00	8,314.62	5.79	110	112.3	3	2.8	6			NB		
30	07:00	8,272.81	5.74	110	113.6	5	4.2	6			MB		
31	07:00	8,281.38	5.76	120	118.1	5	3.4	8			MB		

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Weekly Injectate Samples

Kansas Lab Certificate Number E-10116

Week	**Temperature**		**pH**		**Chloride**				
	Degrees Fahrenheit	Date	Standard Units	Date	Cl concentration (mg/l)	Date Sample Collected	Date Sampl Analysed		
1	81.50	12/06/2022	7.59	12/06/2022	784.0	12/06/2022	12/20/2022		
2	80.00	12/13/2022	7.45	12/13/2022	797.0	12/13/2022	12/20/2022		
3	77.20	12/20/2022	7.26	12/20/2022	854.0	12/20/2022	12/28/2022		
4	74.00	12/27/2022	7.42	12/27/2022	753.0	12/27/2022	01/05/2023		
5									

No monthly injectate samples required.

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Quarterly Injectate Samples

Quarter 4
Date Sample Collected 12/20/2022
Kansas Lab Certificate Number E-10116
Lab Name Pace Analytical-Lenexa

These samples shall be representative of injection activity and shall therefore be collected on days of injection.

Constituent	Value	Units
1,2 Dichloroethene	ND	mg/l
Ammonia	3.300	mg/l
Benzene	ND	mg/l
Calcium	358.000	mg/l
Conductivity	4.750	Mmhos
Ethylbenzene	ND	mg/l
Iron	2.290	mg/l
Magnesium	35.000	mg/l
Oil & Grease	5.200	mg/l
Sodium	560.000	mg/l
Sulfate	633.000	mg/l
Toluene	ND	mg/l
Total Alkalinity as CaCO3	475.000	mg/l
Total Dissolved Solids	2,820.000	mg/l
Total Suspended Solids	16.200	mg/l
Trichloroethene	ND	mg/l
Xylene	0.035	mg/l